



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,674	07/30/2003	Johannes Menzel	A 91755	6480
7590	04/21/2005		EXAMINER	
Walter Ottesen Patent Attorney P.O. Box 4026 Gaithersburg, MD 20885-4026			BURCH, MELODY M	
			ART UNIT	PAPER NUMBER
			3683	

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/629,674

Applicant(s)

MENZEL ET AL.

Examiner

Melody M. Burch

Art Unit

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-10 and 12-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-10 and 12-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/14/05 has been entered.

### ***Specification***

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification lacks support for the term "a remainder" as recited in line 5 of claim 17.

### ***Claim Objections***

3. Claims 2-10, and 12-17 are objected to because of the following informalities: the phrase "the turns" should be changed to —turns—in line 3 from the bottom of claim 17.

The remaining claims are objected to due to their dependency from claim 17.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 3683

5. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "a range of approximately greater than one turn to four turns" in the last two lines of the claim is indefinite. It is unclear whether Applicant intends to include a limitation wherein the number of turns is greater than four turns as suggested by the claim language.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 3, 6, 7, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 3141660 to Clarke et al.

Re: claims 3 and 17. Clarke et al. show in the figure an antivibration element comprising: a coil spring 10 subject to deformation under load during operation of the antivibration element, the coil spring defining a longitudinal axis and having an end section, a remainder, and a transition section extending from the end section to the remainder, a guide member 12 having a helically shaped guide slot wherein turns of the coil spring are guided, the end section and the transition section being guided in the guide slot, the end section being fixed in the guide slot, the helically shaped guide slot

Art Unit: 3683

having a base and the transition section being guided in the guide slot with a first play to the base measured in radial direction as shown, the guide slot having first and second flanks delimiting the slot in the axial direction of the longitudinal axis, and the transition section having a second play to the first flank in the axial direction and a third play to the second flank also in the axial direction as shown with the plays becoming overcome during the deformation under load so as to permit the turns of the transition section to lie at least in part against the guide slot thereby increasing the stiffness of the coil spring.

Re: claims 6 and 7. Clarke et al. show in the figure the limitation wherein the coil spring has first and second ends (radial ends – one radial end shown at the radially outermost section of the right top coil and the other radial end shown at the radially outermost section of the left bottom coil) twisted relative to each other by approximately a half turn.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clarke et al. in view of US Patent 4886250 to Lucas.

Clarke et al. describe the invention substantially as set forth above, including the coil spring having a plurality of turns, but does not disclose the specific number of turns claimed.

Art Unit: 3683

Lucas teaches in col. 7 lines 16-17 that the firmness of a spring is adjusted by changing the number of turns.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the number of turns of the end section and the transition section of the spring of Clarke et al. to have been greater than approximately 1 1/4 turns and in a range of approximately greater than one turn to four turns, as best understood, in view of the teachings of Lucas, in order to adjust the firmness of the spring in the particular spring areas to achieve desired damping characteristics as best determined by the spring application.

Examiner also notes that it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. In re Aller, 105 USPQ 233.

Also it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

10. Claims 2, 8, 9, 12, 13, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clarke et al. in view of US Patent 4712778 to Newman.

Re: claim 2. Clarke et al. describe the invention substantially as set forth above, but do not include the limitation wherein the end section is fixed form tight on the guide slot.

Art Unit: 3683

Newman teaches in figure 3 a limitation wherein the end section of an antivibration element is fixed form tight on a guide slot as shown between elements 45 and 49.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the end section of Clarke et al. to have been fixed form tight on the guide slot, as taught by Newman, in order to provide a means of more securely attaching the spring to the slot to prevent inadvertent slipping out.

Re: claims 8 and 9. Clarke et al. describe the invention substantially as set forth above, but do not show the limitation wherein of a second guide slot and second guide member.

Newman teaches in figure 3a the use of two guide members with guide slots wherein the guide members are configured as plugs.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the antivibration element of Clarke et al. to have included a second guide member, as taught by Newman, in order to provide a means of supporting the second end of the spring.

Re: claim 12. Clarke et al., as modified, show in the figure of Clarke et al. the spacing of the base of the guide slots to the longitudinal center axis becoming less with increasing distance from the end section from the bulge of the base down to the tapered portion of the base.

Re: claims 13 and 14. Clarke et al., as modified, teach in figure 3a of Newman the guide slots having a trapezoidally shaped cross-section.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the shape of the slots of Clarke et al. to be trapezoidally shaped, as taught by Newman, in order to provide a means of better accommodating a spring depending on the shape of the spring and the particular spring application.

Also, in *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) the court held that the configuration of a claimed object was a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration is significant.

Re: claim 15. Examiner notes that it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

11. Claims 8, 9, 10, 12, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clarke et al. in view of US Patent 1878128 to Griswold.

Re: claims 8-10 and 16. Clarke et al. describe the invention substantially as set forth above, but do not show the limitation wherein of a second guide slot and second guide member.

Griswold teaches in figure 2 the use of two guide members with guide slots wherein the guide members are configured as plugs.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the antivibration element of Clarke et al. to have



included a second guide member, as taught by Griswold, in order to provide a means of supporting the second end of the spring.

Re: claim 12. Clarke et al., as modified, show in the figure of Clarke et al. the spacing of the base of the guide slots to the longitudinal center axis becoming less with increasing distance from the end section from the bulge of the base down to the tapered portion of the base.

12. Claims 12, 13, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clarke et al. in view of US Patent 4712778 to Newman. as applied to claim 9 above and further in view of 3779537 to Kalister.

Re: claim 12. In an alternate interpretation, Clarke et al., as modified, describe the invention substantially as set forth above including the limitation of the coil spring defining a longitudinal center axis, but does not include the limitation of the spacing of the base of the slot to the longitudinal center axis becoming less with increasing distance from the end section.

Kalister teaches in figure 2 the use of an antivibration element wherein the coil spring 31 defines a longitudinal center axis, and wherein, in the transition section or section shown in the area of the lead arrow of number 31 the spacing of the base of the slot to the longitudinal center axis becomes less with increasing distance from the end section shown in the area of the lead arrow number 12 by virtue of the cone configuration of the guide member 10.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the guide member(s) of Clarke et al., as modified,

Art Unit: 3683

to have been configured in the form of a cone such that the spacing of the base of the slot to the longitudinal center axis becomes less with increasing distance from the end section, as taught by Kalister, in order to provide a functionally equivalent end connector or guide member to support the coil spring as taught by Kalister in col. 1 lines 25-27. The cone configuration results in the presence of varying coil diameters which adjusts the damping characteristic of the spring.

Re: claims 13 and 14. Clarke et al., as modified, teach in figure 3a of Newman the guide slots having a trapezoidally shaped cross-section.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the shape of the slots of Clarke et al. to be trapezoidally shaped, as taught by Newman, in order to provide a means of better accommodating a spring depending on the shape of the spring and the particular spring application.

Also, in *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) the court held that the configuration of a claimed object was a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration is significant.

Re: claim 15. Examiner notes that it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

13. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clarke et al. in view of US Patent 1878128 to Griswold as applied to claim 9 above and further in view of 3779537 to Kalister.

Re: claim 12. In an alternate interpretation Clarke et al. as modified describes the invention substantially as set forth above including the limitation of the coil spring defining a longitudinal center axis, but does not include the limitation of the spacing of the base of the slot to the longitudinal center axis becoming less with increasing distance from the end section.

Kalister teaches in figure 2 the use of an antivibration element wherein the coil spring 31 defines a longitudinal center axis, and wherein, in the transition section or section shown in the area of the lead arrow of number 31 the spacing of the base of the slot to the longitudinal center axis becomes less with increasing distance from the end section shown in the area of the lead arrow number 12 by virtue of the cone configuration of the guide member 10.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the guide member(s) of Clarke et al., as modified, to have been configured in the form of a cone such that the spacing of the base of the slot to the longitudinal center axis becomes less with increasing distance from the end section, as taught by Kalister, in order to provide a functionally equivalent end connector or guide member to support the coil spring as taught by Kalister in col. 1 lines 25-27. The cone configuration results in the presence of varying coil diameters which adjusts the damping characteristic of the spring.

***Response to Arguments***

14. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 571-272-7114. The examiner can normally be reached on Monday-Friday (6:30 AM-3:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*mmb*

mmb

April 18, 2005

*Melody M. Burch*  
4/18/05